

## Cotton Ginner's Handbook Revised

Anyone who thinks that cotton is still “made” on the same type of gin Eli Whitney patented in 1794 had better look again. Whitney’s gin was replaced in 2 years by a blacksmith named Henry Ogden Holmes.

Quick change has been a hallmark of the cotton ginning industry ever since.

The “Cotton Ginners Handbook,” newly published in its third edition, has guided the industry through those changes for the past 30 years.

Today, cotton goes through a complex sequence of cleaning and drying designed to produce the highest quality fiber.

Fiber quality is best the day a cotton boll opens. Problems during any production stage cause irreversible damage and reduce profits.

USDA has played an important role in the U.S. cotton industry since establishing a cotton ginning research program in Stoneville, Mississippi, in 1931. That same year, USDA engineers developed a dryer that rapidly moved into use throughout the Cotton Belt—and later, the world. Before this invention, gins were producing a lot of damp, trashy cotton that would not spin well or make high-grade yarn, costing millions of dollars in lost value.

In the late 1950’s and early 1960’s, ARS scientists in New Mexico helped develop a rotary-knife roller gin for use with the extra-long cotton fibers used in the manufacture of expensive dress shirts. ARS engineers in New Mexico later computerized the operation for greater efficiency.

W. Stanley Anthony, coeditor of the handbook, and ARS colleagues in Mississippi developed computerized controls for optimal drying and cleaning in regular gins, netting farmers up to \$25 more a bale for higher quality.

The 348-page handbook includes a diagram of a “multi-stage bur and stick extractor” patented by Roy V. Baker, an ARS engineer in Texas. Baker says the compact machine he and his colleagues developed has “outperformed conventional extraction equipment and combines three stages in one machine.”

ARS scientists continue improving equipment, methods, and cotton varieties up to the present day.—**By Don Comis, ARS.**

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*The handbook may be ordered for \$21 (\$26.25 foreign) from the Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954 (Stock Number 001-000-04614-4); phone (202) 512-1800. ♦*